

## II. CLAIM AMENDMENTS

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1. (Cancelled)

2. (Previously Presented) A device as in claim 3 wherein the differential data bus comprises a differential twisted pair line.

3. (Previously Presented) A device for changing a termination voltage of a differential data bus, the differential data bus comprising a first data bus and a second data bus, the device comprising:

a first adjustable termination path connectable to the first data bus;

a second adjustable termination path connectable to the second data bus; and

a switch connectable in parallel with the first adjustable termination path and the second adjustable termination path;

wherein the first adjustable termination path is switchable between an open emitter pulldown and matching impedance or a line to line impedance of the first data bus and the second data bus.

4. (Previously Presented) A device for changing a termination voltage of a differential data bus, the differential data bus comprising a first data bus and a second data bus, the device comprising:

a first adjustable termination path connectable to the first data bus;

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a second adjustable termination path connectable to the second data bus; and

a switch connectable in parallel with the first adjustable termination path and the second adjustable termination path;

wherein the second adjustable termination path is switchable between an open emitter pulldown and matching impedance or a line to line impedance of the first data bus and the second data bus.

5. (Previously Presented) A device as in claim 3 wherein the switch is a field effect transistor (FET).

6. (Cancelled)

7. (Previously Presented) A method as in claim 9 wherein the step of connecting the variable termination to the differential data bus further comprises the step of:

connecting a field effect transistor (FET) to the variable termination, wherein the FET enables the first termination path or the second termination path.

8. (Previously Presented) A method as in claim 9 wherein the step of enabling the first termination path further comprises the step of configuring the first termination path to be 100 ohms between the first data bus and the second data bus.

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9. (Currently Amended) A method for changing terminations in an emitter coupled logic (ECL) transceiver having a differential data bus, the method comprising the steps of:

connecting a variable termination to the differential data bus, wherein the variable termination is a first termination path or two second termination paths, the differential data bus comprising a first data bus, and a second data bus;

enabling the first termination path when the ECL transceiver is in a receive mode; and

enabling the two second termination paths when the ECL transceiver is in a transmit mode;

wherein the step of enabling the two second termination paths further comprises the steps of:

configuring a first ~~one~~ of the two second termination paths to be 50 ohms between the first data bus and a -2vdc source; and

configuring a second one of the two second termination paths to be 50 ohms between the second data bus and the -2vdc source.

10. (Cancelled)

11. (Previously Presented) An apparatus as in claim 12 wherein the variable termination further comprises:

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a field effect transistor (FET), wherein the FET enables the first termination path or the second termination path.

12. (Previously Presented) An apparatus for changing terminations in an emitter coupled logic (ECL) transceiver having a differential data bus, the apparatus comprising:

a variable termination connectable to the differential data bus, the variable termination comprising a first termination path or two second termination paths, the differential data bus having:

a first data bus connectable to the ECL transceiver; and

a second data bus connectable to the ECL transceiver;

wherein the first termination path further is switchable between an open emitter pulldown and matching impedance or a line to line impedance of the first data bus and the second data bus.

13. (Previously Presented) An apparatus for changing terminations in an emitter coupled logic (ECL) transceiver having a differential data bus, the apparatus comprising:

a variable termination connectable to the differential data bus, the variable termination comprising a first termination path or two second termination paths, the differential data bus having:

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a first data bus connectable to the ECL transceiver; and

a second data bus connectable to the ECL transceiver;

wherein the two second termination paths further comprise:

a first one of the two second termination paths to be 50 ohms between the first data bus and a -2vdc source; and

a second one of the two second termination paths to be 50 ohms between the second data bus and the -2vdc source.

14. (Original) A device for changing a termination voltage of a differential data bus, the differential data bus comprising a first data bus and a second data bus, the device comprising:

a resistive circuit connecting the first and second data buses to each other; and

a switch circuit located between the resistive circuit and a negative voltage source,

wherein the switch circuit has a connection point with the resistive circuit between two resistors of the resistive circuit, and wherein the switch circuit is operable to selectively connect the first and second data buses, respectively through individual ones of the two resistors, to the negative voltage source.

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15. (Original) A device as in claim 14 wherein the resistive circuit connecting the first and second data buses to each other further comprises two series connected 50 ohm resistors.

16. (Original) A device as in claim 14 wherein the switch circuit located between the resistive circuit and a negative voltage source further comprises a field effect transistor.

17. (Original) A device as in claim 14 wherein the negative voltage source further comprises -2vdc.

18. (Previously Presented) At least one program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform method steps for changing terminations in a programmable logic device (PLD) having a multi-mode data bus, the method comprising the steps of:

connecting a variable termination to the multi-mode data bus, wherein the variable termination is a first termination path or two second termination paths, the multi-mode data bus having:

a first data bus connectable to the PLD; and

a second data bus connectable to the PLD;

wherein a resistive circuit connects the first and second data buses to each other and a switch circuit located between the resistive circuit and a negative voltage source is operable to selectively connect the first and second data buses, respectively, through individual resistances, to the negative voltage source; and

enabling the first termination path when the PLD is in a receive mode; and

enabling the two second termination paths when the PLD is in a transmit mode.

19. (Previously Presented) A multimode termination apparatus for switching between transmit and receive termination for a current mode (similar to ECL), variable speed, differential bus comprising of a positive signal element of the differential bus and a negative signal element of the differential bus, the device comprising:

a first adjustable termination path connectable to the positive signal element of the differential bus;

a second adjustable termination path connectable to the negative signal element of the differential bus; and

a FET switch providing either -2 volts to each adjustable termination differential bus element or a short that connects each differential bus element.

20. (Previously Presented) A device as in claim 19 wherein the differential data bus comprises a differential twisted pair line.

21. (Previously Presented) A device as in claim 19 wherein the first adjustable termination path is 50 ohm to -2 volts or 100 ohms between the positive signal element of the differential bus and the negative signal element of the differential bus.

22. (Previously Presented) A device as in claim 19 wherein the second adjustable termination path is 50 ohm to -2 volts or 100 ohms between the positive signal element of the differential bus and the negative signal element of the differential bus.

23. (Previously Presented) A device as in claim 19 wherein the switch is a field effect transistor (FET).

24. (Previously Presented) A method for changing termination in an emitter coupled logic (ECL) transceiver having a differential data bus, the method comprising the steps of:

connecting a variable termination to the differential data bus, wherein the variable termination is a first termination path or two second termination paths, the differential data bus



having a positive signal element of the differential bus and a negative signal element of the differential bus;

enabling the first termination path when the ECL transceiver is in a receive mode; and

enabling the two second termination paths when the ECL transceiver is in a transmit mode.

25. (Previously Presented) A method as in claim 24 wherein the step of connecting the variable termination to the differential data bus further comprises the step of connecting a field effect transistor (FET) to the variable termination, wherein the FET enables the first termination path or the second termination path.

26. (Previously Presented) A method as in claim 24 wherein the step of enabling the first termination path further comprises the step of configuring the first termination path to be 100 ohms between the positive signal element of the differential bus and the negative signal element of the differential bus.

27. (Previously Presented) A method as in claim 24 wherein the step of enabling the two second termination paths further comprises the steps of:

configuring a first one of the two second termination paths to be 50 ohms between the positive signal element of the differential bus and a -2vdc source; and

configuring a second one of the two second termination paths to be 50 ohms between the negative signal element of the differential bus and the -2vdc source.

28. (Previously Presented) An apparatus for changing terminations in an emitter coupled logic (ECL) transceiver having a differential data bus, the apparatus comprising:

*Cont'd*  
a variable termination connectable to the differential data bus, the variable termination comprising a first termination path or two second termination paths, the differential data bus having:

a positive signal element of the differential bus connectable to the ECL transceiver; and

a negative signal element of the differential bus connectable to the ECL transceiver.

29. (Previously Presented) An apparatus as in claim 28 wherein the variable termination further comprises a field effect transistor (FET), wherein the FET enables the first termination path or the second termination path.

30. (Previously Presented) An apparatus as in claim 28 wherein the first termination path further comprises 100 ohms between the positive signal element of the differential bus and the negative signal element of the differential bus without physically changing the resistive elements.

31. (Previously Presented) An apparatus as in claim 28 wherein the two second termination paths further comprise:

a first one of the two second termination paths to be 50 ohms between the positive signal element of the differential bus and a -2vdc source; and

a second one of the two second termination paths to be 50 ohms between the negative signal element of the differential bus and the -2vdc source.

32. (Previously Presented) A device for changing a termination voltage of a differential data bus, the differential data bus comprising a positive signal element of the differential bus and a negative signal element of the differential bus, the device comprising:

a resistive circuit connecting the first and negative signal element of the differential buses to each other; and

a switch circuit located between the resistive circuit and a negative voltage source,

wherein the switch circuit has a connection point with the resistive circuit between two resistors of the resistive circuit, and wherein the switch circuit is operable to selectively connect the first and negative signal element of the differential buses, respectively through individual ones of the two resistors, to the negative voltage source.

33. (Previously Presented) A device as in claim 32 wherein the resistive circuit connecting the first and negative signal element of the differential buses to each other further comprises two series connected 50 ohm resistors.

34. (Previously Presented) A device as in claim 32 wherein the switch circuit located between the resistive circuit and a negative voltage source further comprises a field effect transistor.

35. (Previously Presented) A device as in claim 32 wherein the negative voltage source further comprises -2vdc.

36. (New) The device of claim 3 wherein the switch is direct coupled to each of the first and second adjustable termination path.

37. (New) The device of claim 3 wherein a coupling between the first adjustable termination path, second adjustable termination path and the switch connected in parallel, does not include a capacitor.

38. (New) The device of claim 3 wherein the device is not frequency limited and provides a wide bandwidth (DC to high MHZ) interface.

39. (New) The method of claim 9 wherein the variable termination is not frequency limited and provides a wide bandwidth.

40. (New) The method of claim 9 further comprising direct coupling a switch in parallel without a capacitor between the first termination path and two second termination paths to enable the steps of configuring.

41. (New) The device of claim 14 wherein the connection point is direct coupled and does not include a capacitor.

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